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10/601,078	06/20/2003	Kenneth Roger Jones	1033-SS00380	7047
84326	7590	06/03/2010	EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/601,078	JONES ET AL.	
	Examiner	Art Unit	
	ANTHONY SOL	2465	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 March 2010.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,2,6-9 and 11-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,2,6-9 and 11-16 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____ .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

- Applicant's Amendment filed 2/24/2010 is acknowledged.
- Claims 1, 6-9, and 11-16 have been amended.
- Claims 1, 2, 6-9, and 11-16 remain pending.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, 6-9, and 11-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 1, 9, and 16,

Claim 1, and similarly claims 9 and 16, recites in part:

"inquiring, from a remote location, a status of an upper-layer communication indicator indicating a **layer 4 or above communication status**, the upper-layer communication indicator displayed at a modem, wherein the status is observable by a visual inspection of the upper-layer communication indicator by an end-user;

...

performing a first set of actions when the status indicates **valid** upper-layer communication, the first set of actions including troubleshooting actions; and

performing a second set of actions when the status indicates **invalid** upper-layer communication, the second set of actions including corrective actions.” (emphasis added)

The specification does not provide a full description of the above emphasized limitations and a best mode for carrying out the invention as required by 35 U.S.C. 112, first paragraph. The specification provides an enabling disclosure for only a layer 3 indicator, specifically a PPPoE indicator. The applicant has amended the claims to particularly recite an indicator indicating a layer 4 or above communication status. The only mention of a layer 4 or above is in reference to figure 2; however, the description is only describing a well-known International Standards Organization (ISO) standard's model, consisting of seven layers (see Specification, para. [1019]). It does not describe a layer 4 or above communication status indicator. The specification at para. 40 (using applicant's PG Pub, US 2004/0258143) broadly describes an "upper-layer indicator" in reference to fig. 4. Again, however, there is no mention of a layer 4 or above communication status indicator, only a layer 3 indicator, specifically a PPPoE indicator (see Specification, para. [1036]).

Therefore, the specification does not fully describe a layer 4 or above communication status indicator nor is there a best mode set forth in using the layer 4 or above communication status indicator as required by 35 U.S.C. 112, first paragraph.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 6-9, and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Pub. No. US 2006/0212919 A1 ("Tsang").

Regarding claims 1, 2, 6, 9, and 16,
AAPA discloses inquiring, from a remote location, a status of an upper-layer communication indicator, wherein the status is observable by a visual inspection of the indicator by an end-user (Applicant's specification, pg. 9, para. 1035, *To trouble-shoot a DSL connection... in prior art systems, higher-level communications are often terminated internally to the transceiver, without indicating to the end-user if the communications were successful or not. In such systems, to determine communication status may require opening a web browser on a connect computer, logging in to the transceiver, and viewing information on communication status... via a graphical*

user interface (GUI). *These extra steps require end-user involvement -- In other words, the service technician would remotely ask for assistance from the subscriber/customer in viewing communication status of an upper-layer communication and relaying the information to the service technician); entering the status into data storage (this step would coincide with the service technician inputting the communication status in order to determine the next step in the troubleshooting); performing a first set of actions when the status indicates valid upper-layer communication, the first set of actions including troubleshooting actions and performing a second set of actions when the status indicates invalid upper-layer communication, the second set of actions including corrective actions (see Applicant's specification, pg. 9, para. 1035, *These extra steps require end-user involvement and increase troubleshooting costs* – In other words, as noted above the service technician would remotely ask the subscriber what is observed in the GUI (i.e., whether upper-layer communication status is valid or invalid) and take troubleshooting actions if the upper-layer communication is valid or invalid. Note that AAPA discloses troubleshooting (claimed *troubleshooting or corrective actions*) based on an upper-layer communications status with the involvement of an end-user even though the extra steps would increase troubleshooting costs.*

AAPA does not explicitly disclose upper layer communication indicator indicating a layer 4 or above communication status displayed at a modem.

Tsang discloses a UDP header 420 and status indicator 440 (claimed *layer 4 or above communication status displayed at a modem*; see para. 31, *The status indicator*

440 provides a status indication...This provides the STB 100 with a cost effective mechanism to display status information, including status of the modem). Note that UDP (User Datagram Protocol) is a well-known transport layer protocol, which is a layer 4 protocol.

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of the invention was made to modify the troubleshooting method of AAPA to be used with a status indicator for a layer 4 or above protocol such as the transport layer protocol as taught by Tsang. One skilled in the art would have been motivated to make the combination because the status indicator provides a status indication of the Cable Modem status each time a Discovery Packet is transmitted (Tsang, para. 31). Note that the Discovery Packet includes a UDP header, wherein UDP is a well-known level 4 protocol.

Regarding claims 7 and 8,

AAPA discloses that when problems arise, trouble shooting typically involves the access provider sending a technician to a customer premise (see Applicant's spec, pg. 2, para. 1005).

Regarding claim 11,

AAPA shows in fig. 1, DSLAM 110.

Regarding claim 12,

AAPA discloses that LEDs provide low-level connection status (see Applicant's spec, pg. 2, para. 1006).

Regarding claims 13-15,

AAPA shows in fig. 5 various LEDs, all of which are admitted prior art, except PPPoE.

Response to Arguments

5. Applicant's arguments filed 2/24/2010 have been fully considered but they are not persuasive.

- Applicant's argues on pg. 5 of Remarks regarding claims 1, 2, 6-9, and 11-16, that the claims' "layer 4 or above communication status" is fully disclosed by the specification at para. 16 by a "layer 3 or above communication status." The applicant further argues that the claim element "*performing a first set of actions when the status indicates valid upper-layer communication, the first set of actions including troubleshooting actions; and performing a second set of actions when the status indicates invalid upper-layer communication, the second set of actions including corrective actions*" is fully supported by para. 40 of the application.
- The examiner respectfully disagrees. As detailed in the 35 U.S.C. 112, first paragraph rejection above, the specification does not provide a full

description and a best mode for carrying out the invention as required by 35 U.S.C. 112, first paragraph. The specification provides an enabling disclosure for only a layer 3 indicator, specifically a PPPoE indicator. The applicant has amended the claims to particularly recite an indicator indicating a layer 4 or above communication status. The only mention of a layer 4 or above is in reference to figure 2; however, the description is only describing a well-known International Standards Organization (ISO) standard's model, consisting of seven layers (see paras. 25-28 of the PG Pub, US 2004/0258143). It does not describe a layer 4 or above communication status indicator. The specification at para. 40 (see PG Pub) broadly describes an "upper-layer indicator" in reference to fig. 4. Again, however, there is no mention of a layer 4 or above communication status indicator, only a layer 3 indicator, specifically a PPPoE indicator. The assertion that the limitation "layer 4 or above communication status" is fully disclosed by a "layer 3 or above communication status" (para. 16) is not persuasive because the claim recites that the "status of an upper-layer communication status indicator indicate[s] a layer 4 or above communication status." However, the applicant has defined that the "upper-layer communication indicator indicates a high layer communication status, for example, layer 3 of the OSI model" (see abstract). Furthermore, a description of figure 5 states that it "illustrates a view of a transceiver having an upper level

communication status indicator," but the PPOE indicator 510 of figure 5 is described in numerous places in the specification to be a layer 3 indicator (see para. 17 for example). In addition, the disclosure of "at least a layer 3 or above communication status" (para. 16) only means that it be "at least layer 3" but does not have to be "above" layer 3. So the disclosure does not define upper-layer to be other than layer 3. Therefore, the specification does not fully describe a layer 4 or above communication status indicator nor is there a best mode set forth in using the layer 4 or above communication status indicator as required by 35 U.S.C. 112, first paragraph

- The applicant argues that Armstrong and Tsang do not disclose the limitations of the pending claims as amended.
- The examiner respectfully disagrees. Please see the revised 103 rejections above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY SOL whose telephone number is (571)272-5949. The examiner can normally be reached on M-F 7:30am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/A. S./
Examiner, Art Unit 2465
6/3/2010

/Jayanti K. Patel/

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Supervisory Patent Examiner, Art Unit 2465